

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A method for removing ~~the diketone of the optionally oxidized N-terminal methionine residue, that is characterized by having a peptide or a salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue~~ react 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of a peptide comprising the step of reacting a peptide bearing an N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid with 3,4-diaminobenzoic acid or a salt thereof in the presence of a mixture selected from the group consisting of acetic acid and sodium formate, formic acid and sodium formate, or and formic acid and sodium acetate, for a time and under conditions effective to remove the 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of the peptide.

Claim 2 (currently amended): The method described in Claim 1 wherein the peptide ~~or the salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue~~ the N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid is a peptide or a salt thereof which is obtained by having a peptide or a salt thereof which possesses ~~optionally oxidized N-terminal methionine residue~~ react an N-terminal 2-amino-4-(methylsulfanyl)butanoic acid react with an α ~~diketone~~ alpha-keto carboxylic acid.

Claim 3 (currently amended): The method described in Claim 2 wherein the peptide which possesses ~~optionally oxidized N-terminal methionine residue~~ the N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid is a peptide which has been manufactured by genetic engineering technology.

Claim 4 (currently amended): The method described in Claim 1 wherein the peptide is selected from the group consisting of (i) a growth hormone, (ii) beta-cellulin, (iii) interleukin-2, (iv) neurotrophin-3, or and (v) apelin.

Claim 5 (original): The method described in Claim 1 wherein the peptide is a growth hormone.

Claim 6 (currently amended): The method described in Claim 1 ~~that is characterized by~~, wherein the acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate ~~being~~ is used as a buffer solution of approximately 0.1 to 8 mol/L, with a pH of approximately 2 to 9.

Claim 7 (currently amended): A method for removing ~~the diketone of the optionally oxidized N terminal methionine residue, that is characterized by having a peptide or a salt thereof which possesses a diketone of the optionally oxidized N terminal methionine residue~~ react 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of a peptide comprising the step of reacting a peptide bearing an N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate, for a time and under conditions effective to remove the 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of the peptide.

Claim 8 (currently amended): A method for the manufacture of a peptide ~~or a salt thereof which does not possess optionally oxidized N terminal methionine residue~~ an N-terminal 2-amino-4-(methylsulfanyl)butanoic acid characterized by having, ~~which comprises reacting a peptide or a salt thereof which possesses a diketone of the optionally oxidized N terminal methionine residue react possessing 2-oxo-4-(methylsulfanyl)butanoic acid with 3,4-diaminobenzoic acid or a salt thereof in the presence of a mixture selected from the group consisting of acetic acid and sodium formate, formic acid and sodium formate, or and formic acid and sodium acetate, for a time and under conditions effective to remove the 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of the peptide.~~

Claim 9 (currently amended): The method of manufacture described in Claim 8 wherein the peptide ~~or the salt thereof~~ which possesses ~~a diketone of the optionally oxidized N terminal methionine residue~~ an N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid is a peptide or a salt thereof obtained by having a peptide or a salt thereof which possesses ~~optionally oxidized N terminal methionine residue~~ react an N-terminal 2-amino-4-(methylsulfanyl)butanoic acid react with an ~~α -diketone~~ alpha-keto carboxylic acid.

Claim 10 (currently amended): The method of manufacture described in Claim 8 ~~that is characterized by~~ , wherein the acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate ~~being~~ is used as a buffer solution of approximately 0.1 to 8 mol/L, with a pH of approximately 2 to 9.

Claim 11 (currently amended): A method for manufacturing a peptide or a salt thereof which does not possess an N-terminal ~~methionine residue characterized by having~~ 2-amino-4-(methylsulfanyl)butanoic acid, which comprises reacting a peptide or salt thereof which possesses ~~a diketone of the N terminal methionine residue~~ react an N-terminal 2-oxo-4-(methylsulfanyl)butanoic acid with 3,4-diaminobenzoic acid ~~or a salt thereof~~ in the presence of acetic acid and sodium formate, for a time and under conditions effective to remove the 2-oxo-4-(methylsulfanyl)butanoic acid from the N-terminus of the peptide.

Claim 12 (currently amended): A method for manufacturing human growth hormone or a salt thereof which does not possess an N-terminal methionine residue characterized by having 2-amino-4-(methylsulfanyl)butanoic acid, which comprises reacting a genetically engineered peptide or salt thereof which possesses ~~optionally oxidized N-terminal methionine residue~~ react an N-terminal 2-amino-4-(methylsulfanyl)butanoic acid with glyoxylic acid or a salt thereof in the presence of cupric sulfate and pyridine to obtain a reaction product, then reacting the reaction product with 3,4-diaminobenzoic acid ~~or a salt thereof~~ in the presence of a mixture selected from the group consisting of acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate, for a time and under conditions effective to remove the 2-amino-4-(methylsulfanyl)butanoic acid from the N-terminus of the peptide.

Claims 13-16 (canceled)